REMARKS

In the present application, claims 1, 3, 4, 7, 8, 17, 19, 20, 21, 41, 43 and 47 were pending. Claims 48 and 49 are herein added to further claim the present invention.

In the Office Action, claims 1, 3, 4, 7, 8, 41 and 47 are rejected under 35 U.S.C §103(a) as being unpatentable over U.S. Patent No. 4,919,711 to Banyai et al. (hereinafter "Banyai"). Claims 1, 3, 4, 7, 8, 41 and 47 are also rejected under 35 U.S.C §103(a) as being unpatentable over Banyai alone or in view of U.S. Patent No. 4,597,797 to Rooda et al (hereinafter "Rooda"). Claims 1, 3, 7, 8, 41 and 47 are further rejected under 35 U.S.C §103(a) as being unpatentable over Banyai alone or in view of Rooda, and further in view of U.S. Patent No. 3,591,543 to Stafford (hereinafter "Stafford"). These rejections are hereby respectfully traversed.

Banyai discloses a process for agglomerating a concentrated ore material using a binder comprising alkali metal salts of carboxymethyl cellulose (CMC) or carboxymethyl hydroxyethyl cellulose and sodium tripolyphosphate. Banyai briefly mentions that other substances such as polysaccharides or "inorganic salts" such as sodium citrate or sodium carbonate may also be contained in the binder.

The present invention is directed to a process of commingling metallic ore with a moistening effective amount of water, a binding effective amount of guar, guar derivatives or a mixture thereof, and a binding effective amount of a weak acid. As conceded in the Office Action, Banyai does not disclose a process comprising a binding effective amount of a weak acid. To compensate for the absence of such a teaching in Banyai, it is set forth in the Office Action that metal ions in the water would combine with the acid to form a salt such that the recitation of adding a weak acid is tantamount to reciting that a salt of the weak acid is added and that since the addition of such salt would be obvious in view of Banyai so would the addition of the weak acid. Applicants respectfully disagree.

In Banyai, sodium citrate is included in a listing of exemplary "inorganic salts", such "inorganic salts" listed as "other substances" that may be included in the binder composition of Banyai. Banyai does not disclose what effect the addition of the "inorganic salts" would provide to its binder composition or in what amounts the "inorganic salts" should be added to provide an effect. Even if one skilled in the art were to recognize that citric acid could combine with metal ions in water to form sodium citrate, there would be no expectation he/she could obtain pellets with similar pellet properties as the pellets produced when the sodium citrate is used or even that such in situ formation would not somehow mitigate against the effect provided by "inorganic salts", such as sodium citrate.

As discussed in Applicant's previous responses, it can be seen that when acids are utilized in the process of the present invention, better synergy and pellet strengths result than when salt is used. Thus, it cannot be said that the addition of citric acid would obviously be considered tantamount to adding the salt of a weak acid.

Rooda adds a salt of tartaric acid to the teachings of Banyai. Rooda does not disclose the use of a weak acid. Thus, for the same reasons as set forth above for Banyai alone, the combination of Rooda and Banyai also do not teach, suggest or disclose claim 1 or any of the claims dependent thereon.

Stafford is directed to methods of gelling polyvinyl alcohol. In contrast, Banyai is directed to a method of pelletizing ores. There are distinct differences between gelling polyvinyl alcohol and pelletizing ores and one skilled in the art would not be motivated to combine these teachings. Even if, in arguendo, such a combination of references was proper, the combination still would not teach, suggest or disclose the present invention. Stafford discloses that by adding a water soluble organic acid of 1-6 carbon atoms and a water soluble alkali metal hydroxide, a salt may be prepared in situ. Stafford does not teach, suggest or disclose a mechanism one skilled in the art could utilize to determine that the mere addition of a weak acid to a combination of metallic ore and a moistening

effective amount of water would result in the in situ formation of the salt of a weak acid to an extent tantamount to adding the salt.

Thus, the combination of Banyai, Rooda, and Stafford would still not teach, suggest or disclose the present invention as described in claim 1 and its dependent claims.

In the Office Action, claims 17, 19, 20, 21 and 43 are rejected under 35 U.S.C §103(a) as being unpatentable over Banyai. This rejection is respectfully traversed.

Banyai discloses a binder composition comprising (1) a water soluble polymer selected from the group consisting of alkali metal salts of CMC or carboxymethyl hydroxyethyl cellulose and (2) sodium tripolyphosphate, and a process for agglomerating a concentrated ore material using such a binder. Banyai states that the binder composition may also contain other substances, i.e. substances in addition to the alkali metal salts and sodium tripolyphosphate that form the basis of Banyai's invention. The list of "other substances" that could also be contained in the binder includes polysaccharides such as guar and "inorganic salts" such as sodium citrate. Even if, in arguendo, it is assumed that Banyai discloses that the performance of the alkali metal salts of CMC and the salts of carboxymethyl hydroxyethyl cellulose in binder compositions could be enhanced by the inclusion of one or more of these "other substances" (which are also said to include "substances that are formed as by-products in the preparation of the alkali metal salt of CMC"), there is nothing in Banyai that would teach, suggest or disclose that such "other substances" would be effective without the alkali metal salts of CMC or carboxymethyl hydroxyethyl cellulose and sodium tripolyphosphate binder components taught by Banyai.

In summary, the present invention is both novel and non-obvious in view of the references cited in the Office Action. The Applicants respectfully request that the Examiner reconsider the rejection and find the claims in condition for immediate allowance.

In accordance with Section 714.01 of the M.P.E.P., the following information is presented in the event that the Examiner deems a call desirable:

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